## Soils and Geology

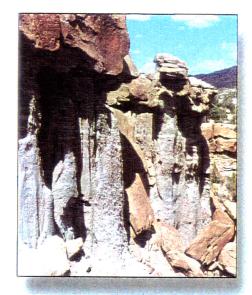
Greystone conducts soils and geologic studies to characterize baseline conditions, identify potential hazards, and develop mitigation measures to minimize anticipated impacts. Our geologists and soils scientists conduct literature research, field mapping and sampling, laboratory analyses, and prepare technical reports that summarize findings.

#### Soil Resources

- Soil Survey and Mapping
- Soil Profile Descriptions
- Physical/Chemical Field Analyses
- Laboratory Analyses
- Soil Hazards Assessment
- Topsoil Salvage/Redistribution Plans
- Erosion Control Plans
- Reclamation Plans
- Contaminated Soil Remediation

### Geologic Resources

- Bore Hole/Lithologic Log Analysis
- Geologic Mapping
- Surficial and Bedrock Characterization
- Seismic Risk Analysis
- Slope Stability Studies
- Landslide Hazard Assessments
- Mineral Resource Evaluations
- Paleontological Resources Studies





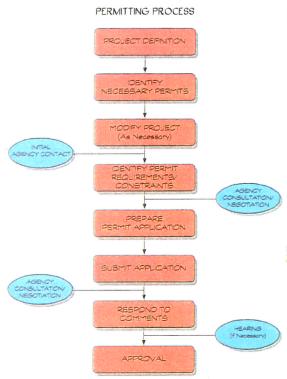


## **Permitting**

Greystone specializes in the application of its environmental and regulatory knowledge to acquire the federal, state, and local permits required for a proposed project or action. Our permitting services include strategic planning; identification of permits/approvals and their schedule and technical requirements; agency coordination and negotiation; data collection and analysis; preparation of permit applications; public hearing presentations; and development of compliance monitoring plans.

### Federal Permits

- Environmental Impact Assessment (NEPA)
- Water Discharge (NPDES)
- Air Quality (NSR, PSD, Title V, Title IV)
- 404 Permits (Wetlands)
- Hazardous Materials (RCRA)
- Right-of-Way
- Special Use Authorization



### State Permits

- Environmental Impact Assessment
- Air Quality (NSR, PSD, Title V, Fugitive Dust)
- Water Quality (NPDES, 401, Well Permits, SWMP)
- Mining and Reclamation
- Solid Waste Disposal
- Wetlands and Streambed Alterations
- Spill Prevention (SPCC Plans)
- Public Utility Commission (CPCN)

### **Local Permits**

- Land Use/Zoning Approvals
- Conditional/Special Use Permits
- Exemptions/Waivers
- Planned Unit Development (PUD)
- Noise Ordinance Compliance
- Annexations

# Public and Stakeholder Involvement

Greystone has developed and implemented detailed public/stakeholder participation programs for many environmental planning and analysis projects. The format and extent of the program are determined by the level of public interest and/or controversy. Our goals for public programs are to increase public awareness and understanding of proposed projects, define associated issues and concerns, develop alternatives that respond to the issues, facilitate the role of stakeholders in the environmental planning and review process, and resolve conflicts.

### Meeting/Planning/Facilitation

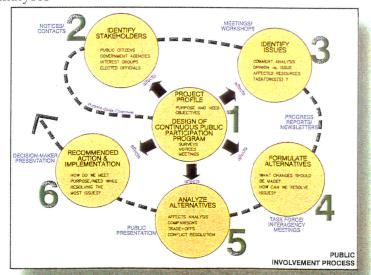
- Public Workshops
- Open Houses
- Formal Hearings
- Interagency Meetings
- Joint Review Committees
- Landowner Interaction

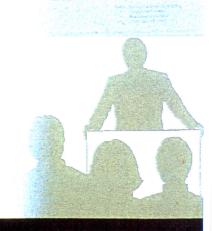
### Conflict Resolution/Consensus Building

- Issue Clarification
- Trade-Off Analyses
- Interagency Review
- Comment Analysis/Response
- Alternatives Development
- Issue-Focused Workgroups
- Roundtable Negotiations
- Cost/Benefit Analyses

#### Information/Communication

- News Releases/Public Notices
- Scoping Documents
- Newsletters/Information Bulletins
- White Papers
- Questionnaires/Surveys
- Visual Presentations
- Internet Web Pages
- "800" Information Phone Lines
- Multi-Lingual Translation Services





# Geographic Information Systems

Geographic Information System (GIS) technology is a valuable and effective tool for compiling, displaying, and analyzing data. From simple mapping to comprehensive database design, Greystone provides a wide range of customized GIS and mapping applications that create accurate and cost-effective graphics and data analyses to allow better understanding, more effective communication, and better focused problem solving.

### Geospatial Analysis

- Data Acquisition/Digitizing
- Database Design and Development
- Database Management/Archiving
- Digital Elevation Model (DEM)
- Aerial and Satellite Image Processing and Mosaicing
- Raster and Vector Based Spatial Analysis
- Global Positioning System (GPS) Data Collection



### Geographic Visualization

- Viewshed and Line-of-Sight Analysis
- 3-Dimensional Surface Modeling
- Visual Simulations
- 3-Dimensional Fly-through Simulations
- Contouring, Slope, Aspect, Hillshade, and Volumetrics
- Cartographic Mapping